



ISSN Print 2615-5648  
ISSN Online 2615-174X

**Editorial Office:** Faculty of Sharia, Universitas Islam Negeri Profesor Kiai Haji Saifuddin Zuhri Purwokerto, Indonesia, Jalan Jend. A. Yani No. 40 A Purwokerto Jawa Tengah 531226 Indonesia  
Phone: +62281-635624 Fax: +62281- 636653  
E-mail: [volksgeist@uinsaizu.ac.id](mailto:volksgeist@uinsaizu.ac.id)  
Website: <http://ejournal.uinsaizu.ac.id/index.php/volksgeist>

## Assessing the Impact of Electronic Court Systems on the Efficiency of Judicial Processes in the Era of Digital Transformation

### Article

#### **Author**

Djamaludin<sup>1</sup>, Muhammad Fahrudin Aziz<sup>2\*</sup>, Yanuriansyah Ar-Rasyid<sup>3</sup>, Iskandar Ali As-Sayyis.<sup>4</sup>

<sup>1,2,3</sup> Sekolah Tinggi Ilmu Hukum Biak-Papua, Papua, Indonesia  
<sup>4</sup> Faculty of Sharia and Law, Al Ahgaff University, Yemen

#### **Corresponding Author:**

\* Muhammad Fahrudin Aziz,  
Email: [fahrudinaziz@stihbiak.ac.id](mailto:fahrudinaziz@stihbiak.ac.id)

#### **Data:**

Received: Apr 13, 2023;  
Accepted: Jun 20, 2023;  
Published: Jun 27, 2023

#### **DOI:**

[10.24090/volksgeist.v6i1.8082](https://doi.org/10.24090/volksgeist.v6i1.8082)

### Abstract

The E-court system promotes the transparency and efficiency globally, however, the Eastern Indonesian courts face challenges due to infrastructure and literacy. Nonetheless, its benefits are crucial for the justice system modernization. This study evaluated the E-court system's effect on the judicial process's efficiency in the Religious and District Courts of Biak Numfor using a quantitative research methodology. A survey was conducted on 100 respondents to assess the user satisfaction and system effectiveness, especially in remote areas. The data were analyzed using descriptive analysis and simple linear regression, which will provide valuable insights. The findings indicate that the E-court system significantly and positively affects the judicial process's efficiency, and users found it efficient, user-friendly, reliable, secure, and satisfactory. While the quantitative approach provides valuable insights, it also has limitations. Therefore, the study suggests that a qualitative approach could provide a deeper understanding of how information technology affects the justice system. The research results can be useful to the courts in other areas that are considering implementing comparable technologies to enhance process efficiency and user friendliness. In conclusion, the E-court system is a promising technology that can significantly improve judicial process's efficiency and effectiveness. However, further research is a necessity to understand how information technology affects the justice system, and a combination of quantitative and qualitative approaches may provide a more comprehensive understanding.

**Keywords:** *Digital transformation; e-court; judicial process's efficiency.*

©2023; This is an Open Access Research distributed under the term of the Creative Commons Attribution Licencee (<https://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original works is properly cited.

## INTRODUCTION

In this era where information and communication technology (ICT) develops rapidly, ICT is commonly implemented in various aspects of society, including in legal domain. One way of ICT application to the justice system is through creating e-court application. E-court system is an electronic platform aiming at streamlining the judicial process implementation through digitalization.<sup>1</sup>

<sup>1</sup> Susanto Susanto, Muhamad Iqbal, and Wawan Supriyatna, "Menciptakan Sistem Peradilan Efisien Dengan Sistem

The e-court system reforms the law sector by offering a more efficient and hassle-free solution to the complex conventional court procedures.<sup>2</sup> This state-of-the-art technology is specifically designed for legal process optimization, allowing users to initiate legal cases online, store records digitally, manage trial schedules, and deliver verdicts via digital platforms.<sup>3</sup> With the use of the cutting-edge of technology, the e-court system's electronic interface provides a range of unparalleled benefits with the potential for completely transforming the legal format.

As a modern, efficient solution that promotes transparency and accountability in the judicial process, e-court system's popularity is growing globally thanks to its user-friendliness and consistent results.<sup>4</sup> However, the Eastern Indonesian courts face typical challenges in adopting this technology due to limited infrastructure and digital literacy. Despite these obstacles, the e-court system's benefits make it an essential instrument for justice system modernization. The system also employs machine learning and artificial intelligence in order to enhance its efficiency and minimize errors.

Its implementation is already a success in many other Indonesian courts, even if the effectiveness in remote courts incites debates. E-court system implementation may lead to enhanced efficiency and effectiveness in judicial proceedings, specifically in remote courts such as the Religious and District Courts of Biak Numfor. The system offers the courts a way to digitalize case registration, manage trial schedules, and decision process and making on cases electronically. This will lead to reduced time and cost in legal proceedings and better allocation of human resources.

The Religious and District Courts of Biak Numfor face considerable lot of challenges due to their judicial process's low efficiency, of which causes are multi-faceted. First, the limited numbers of personnel have adversely affected public services, including processing, filing, and scheduling trial documents. Besides, the lack of staff delays case resolution, harming the quality of decisions made. Second, the region's low level of digital literacy is hindering the e-court system implementation. The people in Biak Numfor Regency in distant areas lack familiarity with information and telecommunication technology in their daily life. Moreover, the many different local languages make e-court system adoption hard.<sup>5</sup>

There is an urgent need for solutions to improving the judicial process's efficiency and effectiveness of the Religious and District Courts of Biak Numfor. One practical solution is to implement an e-court system that allows online document and trial schedule processing. Nonetheless, before adoption, the court staffs need to have digital literacy training in order to improve the people's access to justice.

---

E-Court Pada Pengadilan Negeri Dan Pengadilan Agama Se-Tangerang Raya," *Jurnal Cendekia Hukum* 6, no. 1 (2020): 104–16, <http://doi.org/10.33760/jch.v6i1.287>.

<sup>2</sup> Dian Latifiani, "Human Attitude and Technology: Analyzing a Legal Culture on Electronic Court System in Indonesia (Case of Religious Court)," *Journal of Indonesian Legal Studies* 6, no. 1 (2021): 157–84, <https://doi.org/10.15294/jils.v6i1.44450>.

<sup>3</sup> Muhamad Iqbal, Susanto Susant, and Mohammad Sutoro, "Efektifitas Sistem Administrasi E-Court Dalam Upaya Mendukung Proses Administrasi Cepat, Sederhana Dan Biaya Ringan Di Pengadilan," *Jurnal Ilmu Hukum: Fakultas Hukum Universitas Riau* 8, no. 2 (2019): 302–15, <http://dx.doi.org/10.30652/jih.v8i2.7286>.

<sup>4</sup> Sahira Jati Pratiwi et al., "The Application of E-Court as an Effort to Modernize the Justice Administration in Indonesia: Challenges & Problems," *Indonesian Journal of Advocacy and Legal Services* 2, no. 1 (2020): 39–56, <https://doi.org/10.15294/ijals.v2i1.37718>.

<sup>5</sup> Iryana Anwar and Muslim Lobubun, "The Role and Function of Legal Aid Posts (Posbakum) at Biak's Religious Court Class IIB," *Volkgeist: Jurnal Ilmu Hukum Dan Konstitusi* 4, no. 2 (2021): 139–151, <https://doi.org/10.24090/volkgeist.v4i2.5184>.

The main objective of this research is to examine the E-court system's impact on the efficiency of trials at the Religious and District Courts of Biak Numfor, while also identifying the factors which may influence the performance of judicial process. The investigation results have practical implications for legal professionals, policy makers and researchers. These reveal how to enhance the E-court system's performance, particularly in remote areas, and accelerate case resolution at the Religious and District Courts of Biak Numfor, which may lead to the courts' higher efficiency.

ICT is employed in the justice system's E-court system. This system aims at improving the judicial process's efficiency and effectiveness through integration of technology into various aspects of court proceedings.<sup>6</sup> The E-court system encompasses a range of electronically employed ICT services to facilitate court proceedings, including electronic submission of applications, electronic collection of documents and evidence, and virtual court sessions.<sup>7</sup> With the E-court system, court documents are electronically accessible, allowing the parties involved to obtain them more conveniently and faster. This system's electronic submission feature efficiently saves both time and effort while enabling collection of evidence and documents.

The E-court system offers the convenience of electronic application submission, including filing lawsuits, appeals, and cassation requests. This eliminates the parties' required involvement in a judicial process to physically appear before the court and allows them to submit any requests faster and easily.<sup>8</sup> Additionally, the E-court system enables virtual trials, where users can participate remotely using the system's video conferencing service. This feature allows users to attend a trial from remote locations or even from abroad, making the judicial process greatly more accessible and convenient.

The E-court system implementation has several advantages: judicial process's enhanced efficiency, reduced administrative errors, and improved transparency. Nevertheless, it is important to satisfy both the technical and non-technical requirements for the success in this system implement, including corresponding ICT infrastructure, available skilled personnel trained in using relevant technology, and supporting regulations.<sup>9</sup> As a result, legal professionals and practitioners are constantly working on improving and developing the E-court system to ensure its maximum benefits in enhancing judicial process's efficiency and effectiveness.

The E-court system is proven highly advantageous to the justice sector, improving its transparency and accountability, lowering the costs and time for accessing documents and participating in trials, and enhancing the court system's efficiency.<sup>10</sup> Moreover, this system enables

<sup>6</sup> Muhammad Luthfi Hendrato, Arief Subyantoro, and Wisnalmawati Wisnalmawati, "The Effect of Organizational Culture and Information Technology on Employee Performance with Employee Satisfaction as a Mediator in The Electronic Court System (E-Court) in District Court of Sleman, Yogyakarta," in *Proceedings of the 4th International Conference on Sustainable Innovation 2020-Accounting and Management (ICoSIAMS 2020)* (Atlantis Press, 2021), 242–46, <https://doi.org/10.2991/aer.k.210121.033>.

<sup>7</sup> Ifah Atur Kurniati, "Mengembalikan Citra Peradilan Melalui E-Court," in *Conference On Communication and News Media Studies*, 2019, 176–85, <https://proceeding.umn.ac.id/index.php/COMNEWS/article/view/1093>.

<sup>8</sup> Vita Mahardhika, "An Electronic Court in the Perspective Criminal Law Reform," in *Proceedings of the International Joint Conference on Arts and Humanities 2021 (IJCAH 2021)* (Atlantis Press SARL, 2021), 894–98, <https://doi.org/10.2991/assehr.k.211223.154>.

<sup>9</sup> Endri Endri, "Urgency And Mechanism of Electronic Evidence Validation In Electronic Court Evidence Rules," *Jurnal Hukum Peratun* 4, no. 1 (2021): 89–104, <https://doi.org/10.25216/peratun.412021.89-104>.

<sup>10</sup> Vania Shafira Yuniar, Jihan Syahida Sulistyanti, and Dian Latifiani, "The Court Role In Providing E-Court System Education To Community: Post-Enactment Of Supreme Court Regulation Number 1 Of 2019," *Jurnal Ilmu Hukum Unifikasi* 8, no. 1 (2021): 34–42, <https://doi.org/10.25134/unifikasi.v8i1.3697>.

the parties involved in legal proceedings to access any information immediately, which may lead to the court's better decision making.

Despite the significant advantages that the E-court system offers, there are still challenges faced in remote or low digital literacy regions, including inadequate infrastructure, which may affect its access and usage. Privacy and data security concerns also pose serious difficulties that require careful management to avert any potential problems.<sup>11</sup> The E-court system has been implemented in some of Indonesian courts, including the Religious and District Courts of Biak Numfor, but its effectiveness and efficiency in remote courts are still debated. This research is essential to investigate the connection between the E-court system implementation and the success in court procedures.

Efficiently handling court cases is crucial for impartiality and timeliness, but challenges like staff shortage, limited infrastructure, and low digital literacy hinder these processes. The information and communication technology, specifically E-court, simplifies and speeds up the judicial processes.<sup>12</sup> Despite mass adoption by some courts, like the Religious and District Courts of Biak Numfor, the system's efficiency in remote courts remains uncertain. E-court enables submitting application electronically, attending trial virtually, and collecting evidence and document quickly, which will speed up case resolution. With the E-court implementation in Indonesia, the judicial system's trustworthiness will improve with its administrative issues addressed and transparency increased.<sup>13</sup> There are, however, still challenges to the use of the E-court system, particularly in rural areas where infrastructure and digital skills are lacking, along with potential pushback from the public and legal community. Therefore, more research is needed to assess the E-court system's impact in Indonesia and determine the factors affecting its success in the courts, like the Religious and District Courts of Biak Numfor.

Before the e-Court system implementation, the litigation process in the Religious Court (*Pengadilan Agama* or PA) and District Court (*Pengadilan Negeri* or PN) of Biak Numfor as a remote area faces significant challenges and limitations. Here is a detailed narrative about the litigation process in PA and PN Biak Numfor before the e-Court system implementation:

#### 1. Case Registration

- a. Parties wishing to file a case had to physically go to the office of PA or PN of Biak Numfor to register their case. This certainly consumed time and incurred additional costs for parties from distant or remote areas.
- b. The case registration was processed manually, where the filing party needed to fill in physical forms and have the required documents attached. This manual registration process could take a considerable amount of time, depending on the number of cases the court was currently processing.

#### 2. Trial Stage

- a. After registration, the case would be scheduled for a trial. The parties involved, including

---

<sup>11</sup> Rozha Kamal Ahmed et al., "Impact of E-Court Systems Implementation: A Case Study," *Transforming Government: People, Process and Policy* 15, no. 1 (2021): 108–28, <https://doi.org/10.1108/TG-01-2020-0008>.

<sup>12</sup> Krisyulaeni Krisyulaeni, "Eksistensi Penerimaan Sistem E-Court Dalam Peradilan Tata Usaha Negara Di Indonesia," *Yustitia* 7, no. 2 (2021): 209–223, <https://doi.org/10.31943/yustitia.v7i2.140>.

<sup>13</sup> Hisam Ahyani, Muhamad Ghofir Makturidi, and Muharir Muharir, "Administrasi Perkara Perdata Secara E-Court Di Indonesia," *Batulis Civil Law Rev* 2, no. 1 (2021): 56–65, <https://doi.org/10.47268/ballrev.v2i1.521>.

plaintiffs, defendants, and witnesses, had to be physically present in the court at the specified time.

- b. Throughout legal proceedings, relevant written materials like petitions, rebuttals, and proof are to be submitted in person before the judge. This protocol could demand a considerable effort and time, mostly for individuals living in remote locations.

### 3. Case Resolution

- a. In the course of trial stage, the judge would evaluate the evidence and arguments given by relevant parties. Manual verdict making process could take a long time.
- b. After decision making, the verdict needed to be delivered to the concerned parties. This delivery process might be time-consuming and require extra work, particularly if the parties are in remote locations.

The time taken by the PA and PN of Biak Numfor for a legal case before the e-Court system implementation differed by complexity and priority. Nevertheless, the process was generally, evidently lengthy due to the limited infrastructure, difficult travel circumstances, and required physical presence for the manual procedures. The e-Court system anticipates and addresses many of the challenges related to litigation process. It permits online case registration, digital document submission, and use of information technology for virtual sessions. The e-Court system's inclusion will streamline and accelerate litigation process in PA and PN of Biak Numfor.

In Indonesia's remote areas, judicial process's effectiveness can be hindered by limited availability of staff, infrastructure, and digital literacy level. To address these challenges, a case study was conducted at the Religious and District Courts of Biak Numfor to assess the E-court System's impact on the courts' efficiency. This study aims to identify the factors affecting the judicial process and evaluate the E-court System's effectiveness in these remote areas. The data were collected through observation, interviews, and questionnaires with users and staff. The findings will help improve the E-court System and increase the efficiency of courts in remote areas.

## RESEARCH METHODS

The main objective of this study was to evaluate the E-court System's effectiveness in the context of the Religious and District Courts of Biak Numfor. A research methodology with questionnaires distributed to 100 respondents was employed to achieve this. The questionnaires consisted of both open-ended and closed-ended questions designed to collect information regarding the system's ease of use and user satisfaction. The data collected would be processed under descriptive analysis and simple linear regression for valuable insights into the system's effectiveness, particularly in remote areas.

These insights would indicate the system's strengths and weaknesses, allowing comprehensive understanding of its impact on judicial process. The research results were anticipated to be a noteworthy contribution to legal experts and researchers' understanding. Empirical evidence would be available for them concerning the E-court System's efficiency. In addition, the outcomes may serve as a blueprint for an E-court System's future enhancement that suits better to satisfy the specific requirements of the Religious and District Courts of Biak Numfor. Conducting this study, we aimed to bridge the existing knowledge gap and enhance our understanding of how the E-court

System operated in the context of the Religious and District Courts of Biak Numfor. Finally, we hope that the research findings will facilitate well-informed decision-making and foster advanced use of technology in the judicial sector.

## ANALYSIS AND DISCUSSION

This study used a quantitative method to survey the judges, court staffs, and lawyers involved in the Religious and District Courts of Biak Numfor. The data were collected using a simple random sampling method from 100 respondents through questionnaire. The questionnaire was about the effectiveness of the judicial process, system usability, reliability, and user satisfaction.

### The Judicial Process's Efficiency

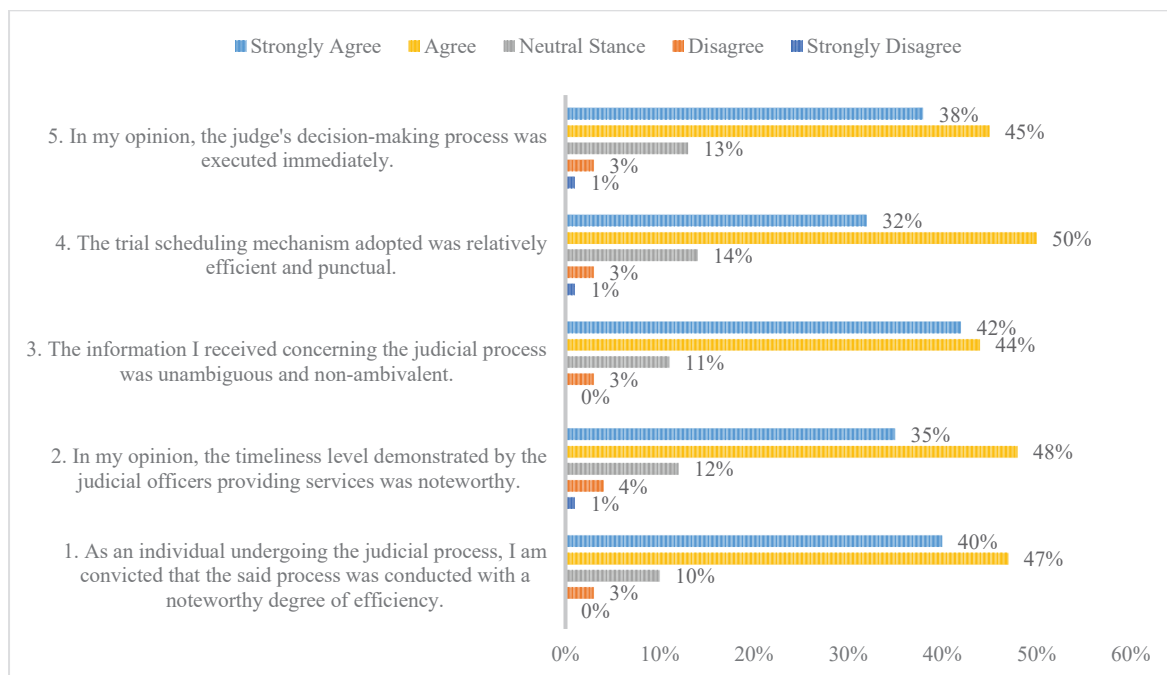
The table and chart below present a descriptive overview of the findings on the judicial process's efficiency based on the 100 participants' responses.

**Table 1:** *The Judicial Process's Efficiency*

No	Questionnaire Items	Mean	Standard Deviation	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	As an individual undergoing the judicial process, I am convinced that the said process was conducted with a noteworthy degree of efficiency.	4.17	0.81	40%	47%	10%	3%	0%
2	In my opinion, the timeliness level demonstrated by the judicial officers providing services was noteworthy.	4.07	0.89	35%	48%	12%	4%	1%
3	The information I received concerning the judicial process was unambiguous and non-ambivalent.	4.21	0.8	42%	44%	11%	3%	0%
4	The trial scheduling mechanism adopted was relatively efficient and punctual.	4.02	0.97	32%	50%	14%	3%	1%
5	In my opinion, the judge's decision-making process was executed immediately.	4.1	0.8	38%	45%	13%	3%	1%

The 100 participants' perception of the current justice system was examined, of which results are presented in the table below. The table presents the five statements assessed using a 1-5 Likert scale, including "I believe that the judicial process I experienced was efficient", "I believe that the services were provided by the judicial officers immediately", "The information I received regarding the judicial process was clear and precise", "The trial scheduling system implemented was suitable

and timely”, and “I think the judges’ decision-making process was quick and impartial”. The table shows that most of the participants agreed on the statements with the mean score ranging from 4.02 to 4.21. The small standard deviation indicates consistent responses.



Picture 1. The Judicial Process's Efficiency

The survey results reveal that the “Strongly Agree” responses were dominated by the statement about the judicial process information’s clarity and accuracy at 42%, suggesting that most of the respondents were satisfied of the judicial process’s transparency. Contradictorily, the variable with the most “Disagree” responses was the trial scheduling system at 3% even if most of the respondents considered it timely. Consequently, the justice system needs further improvement to boost its efficiency and immediateness for its users.

### The E-Court System’s Ease of Use

The table below presents a descriptive summary of the 100 respondents’ opinion on the E-Court System’s usability along with each statement’s corresponding percentage.

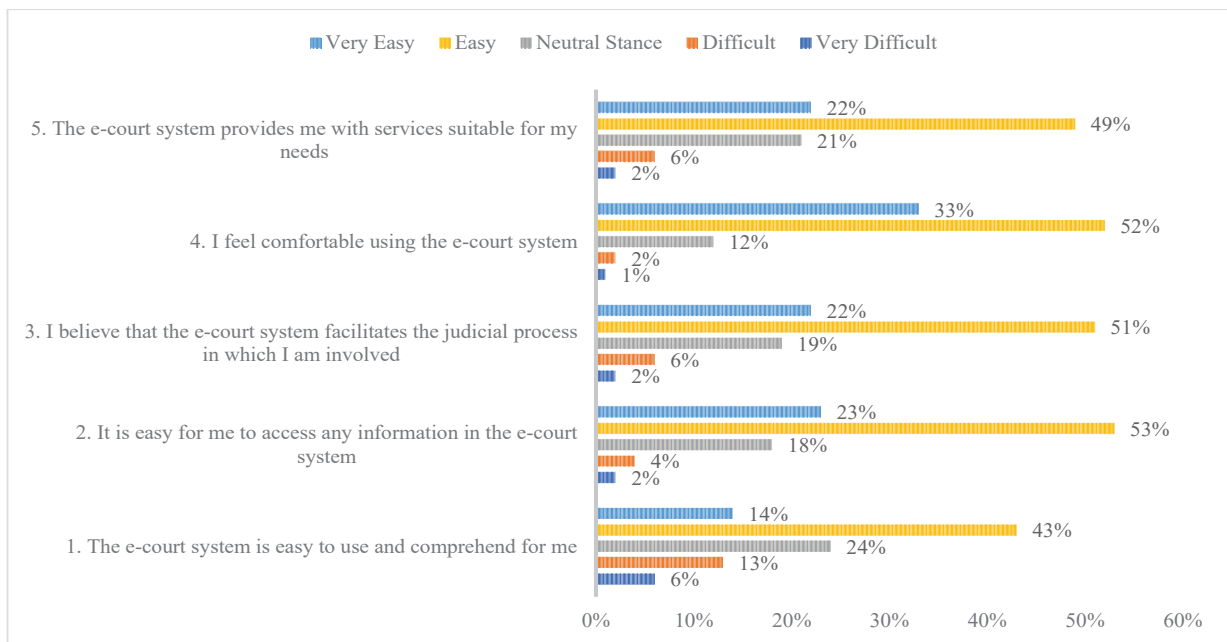
Table 2: The E-Court System’s Ease of Use

No.	Questionnaire Items	Mean	Standard Deviation	Very Difficult	Difficult	Neutral	Easy	Very Easy
1	The e-court system is easy to use and comprehend for me	3.98	0.81	6%	13%	24%	43%	14%
2	It is easy for me to access any information in the e-court system	4.23	0.73	2%	4%	18%	53%	23%

No.	Questionnaire Items	Mean	Standard Deviation	Very Difficult	Difficult	Neutral	Easy	Very Easy
3	I believe that the e-court system facilitates the judicial process in which I am involved	4.11	0.79	2%	6%	19%	51%	22%
4	I feel comfortable using the e-court system	4.26	0.68	1%	2%	12%	52%	33%
5	The e-court system provides me with services suitable for my needs.	4.12	0.75	2%	6%	21%	49%	22%

The table’s statistical summary shows the 100 respondents’ perception regarding the E-Court System’s Ease of Use. All of the statements, rated on a 1-5 scale, had average scores ranging from 3.98 to 4.26 and standard deviations 0.68 to 0.81. The fifth statement scored the highest average 4.26 with standard deviation 0.68, while the first statement scored the lowest average 3.98 with standard deviation 0.81. Overall, the respondents scored the E-Court System’s Ease of Use fairly positively at an average mean score 4.14 and standard deviation 0.71. The respondents rated the system as “easy” or “very easy” ranging from 14% to 33% for each statement.

The responses to the second, fourth, and fifth statements indicate a higher proportion of respondents for the “easy” and “very easy” categories than the first and third statements. The second statement, “I had easy access to the information in the E-Court System,” had the highest percentage for the “easy” and “very easy” categories at 33%. This is followed by the fourth statement, “I feel comfortable using the E-Court System,” had 31% respondents for the “easy” and “very easy” categories, and the fifth statement, “The E-Court System provides services suitable for my needs,” had 29% respondents for the “easy” and “very easy” categories.



Picture 2. The E-Court System’s Ease of Use



Upon analysis of the results, even though the first statement “I easily understand how to use the E-Court System” and the third statement “I feel the E-Court System facilitates the judicial process I was involved in” had lower percentages of “easy” and “very easy” categories compared to the second, fourth, and fifth statements, they still had high percentages of “easy” and “very easy” categories respectively 21% and 18%, indicating that the respondents’ evaluation of the E-Court System’s usability was generally positive.

### The E-Court System’s Reliability

The table below is a summary of the 100 individuals’ responses to questions pertaining to the E-Court System’s reliability along with each statement’s percentage.

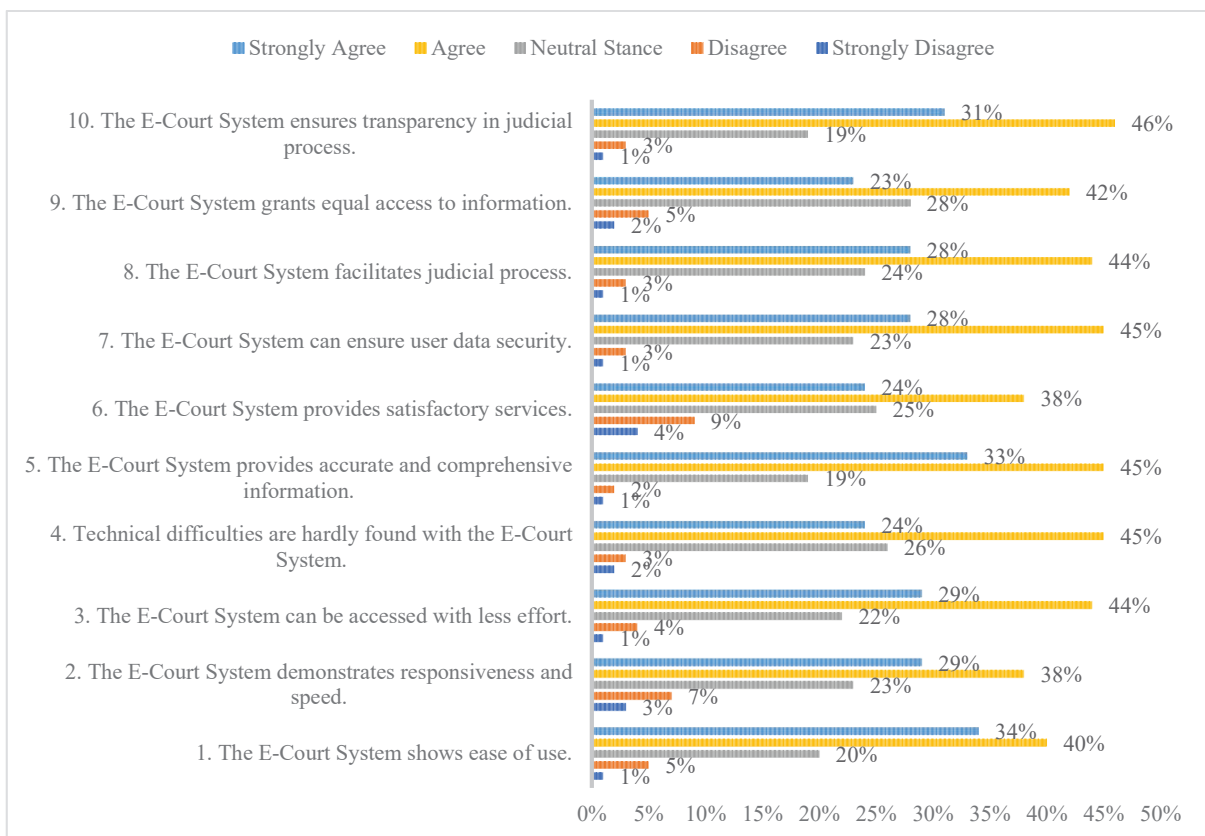
**Table 3:** *The E-Court System’s Reliability*

No.	Questionnaire Items	Mean	Standard Deviation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The E-Court System shows ease of use.	4.20	0.79	1 %	5 %	20 %	40 %	34 %
2	The E-Court System demonstrates responsiveness and speed.	3.96	1.01	3 %	7 %	23 %	38 %	29 %
3	The E-Court System can be accessed with less effort.	4.14	0.90	1 %	4 %	22 %	44 %	29 %
4	Technical difficulties are hardly found with the E-Court System.	4.07	0.89	2 %	3 %	26 %	45 %	24 %
5	The E-Court System provides accurate and comprehensive information.	4.21	0.75	1 %	2 %	19 %	45 %	33 %
6	The E-Court System provides satisfactory services.	3.94	0.97	4 %	9 %	25 %	38 %	24 %
7	The E-Court System can ensure user data security.	4.12	0.87	1 %	3 %	23 %	45 %	28 %
8	The E-Court System facilitates judicial process.	4.11	0.88	1 %	3 %	24 %	44 %	28 %
9	The E-Court System grants equal access to information.	4.02	0.92	2 %	5 %	28 %	42 %	23 %
10	The E-Court System ensures transparency in judicial process.	4.19	0.80	1 %	3 %	19 %	46 %	31 %

The statistical descriptive table reveals that most of the participants scored each variable favorably with the Likert scale 1-5 in the questionnaire pertaining to the e-court system’s reliability. Each variable’s mean average value falls between 4.08 and 4.35, with a standard deviation ranging from 0.65 to 0.81. These results imply that most participants either agreed or strongly agreed on the questionnaire’s statements. Additionally, the low standard deviation suggests that the participants’ responses are relatively homogeneous and not widely spread.

Most of the respondents expressed favorable opinions on the e-court system’s reliability in the statistical analysis on the basis of 1-5 scores Likert scale questionnaire responses. Among the ten variables measured, the mean average values ranged from 4.08 to 4.35, indicating that the respondents generally agreed or strongly agreed on the questionnaire’s statements. Furthermore, the standard deviation was relatively low, indicating that their responses were relatively consistent.

By response percentage, the ease of use variable had the highest percentage of “Strongly Agree” responses at 54%, indicating that most of the respondents found the e-court system user-friendly. The technical problem variable had the lowest percentage of “Disagree” responses, showing only 2% of the respondents disagreeing that the e-court system rarely experienced technical issues. This finding suggests that most of the respondents believed that the e-court system’s technical performance was reliable.



Picture 3. The E-Court System’s Reliability

According to the analysis on the descriptive statistical results, most of the respondents were satisfied with the e-court system’s reliability. In their opinion, the system was easy to

use, responsive, highly accessible, rarely had technical issues, provided accurate and complete information, was satisfactory services, secured user data, facilitated judicial process, provided equal access to information and services, and was transparent in judicial process. However, it is to note that the descriptive statistical results cannot be generalized to the entire population since the samples were limited to only 100 participants, and consequently may not accurately represent the entire population using the e-court system. Therefore, the descriptive statistics may serve as a preliminary indicator of the e-court system's reliability, and further studies are required to ensure its reliability as a whole.

### Satisfaction Level of The E-Court System's Use

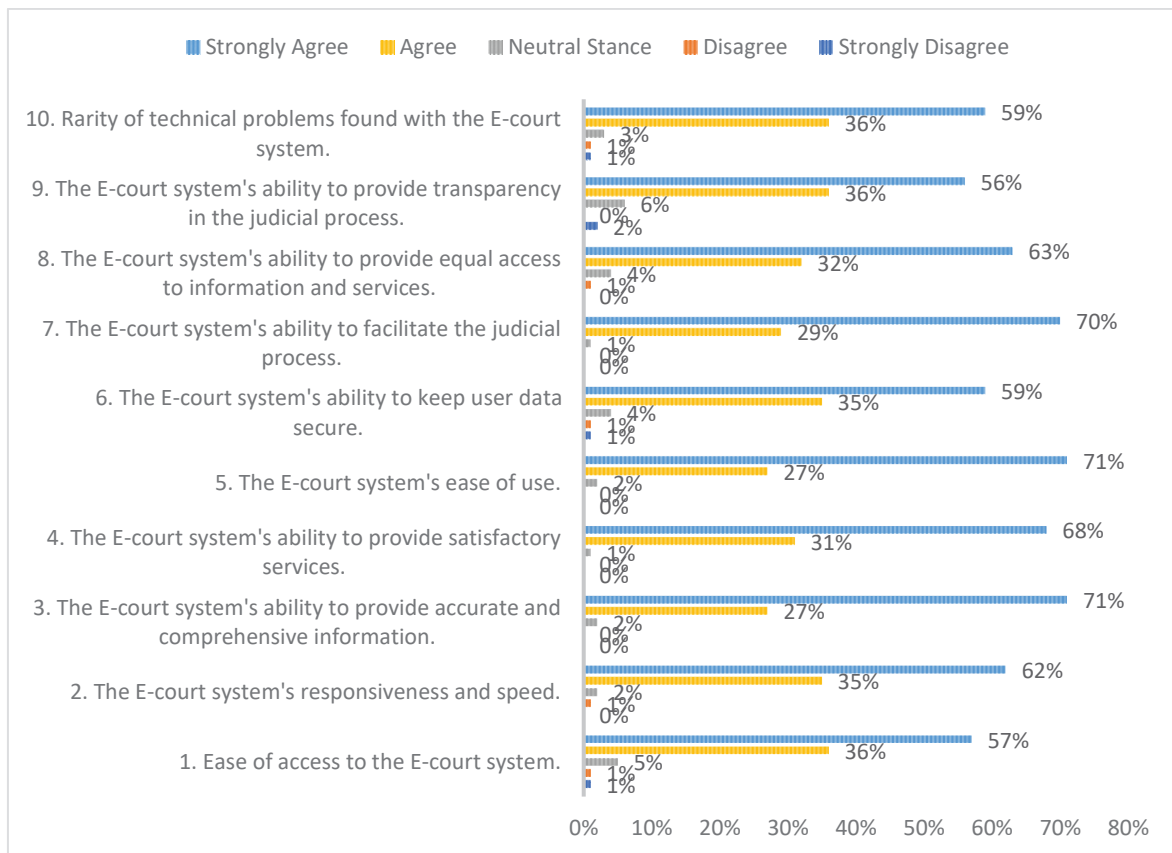
The table below a summary of the results of the Likert scale questionnaire with 100 users as the samples, aimed at measuring their satisfaction level of the use of the E-court System.

**Table 3:** *Satisfaction Level of The E-Court System's Use*

No.	Questionnaire Items	Mean	Standard Deviation	Strongly Disagree	Disagree	Neutral	Agree	Disagree
1	Ease of access to the E-court system.	4.17	0.71	1 %	1 %	5 %	36 %	57 %
2	The E-court system's responsiveness and speed.	4.24	0.69	0 %	1 %	2 %	35 %	62 %
3	The E-court system's ability to provide accurate and comprehensive information.	4.35	0.63	0 %	0 %	2 %	27 %	71 %
4	The E-court system's ability to provide satisfactory services.	4.28	0.67	0 %	0 %	1 %	31 %	68 %
5	The E-court system's ease of use.	4.32	0.68	0 %	0 %	2 %	27 %	71 %
6	The E-court system's ability to keep user data secure.	4.16	0.76	1 %	1 %	4 %	35 %	59 %
7	The E-court system's ability to facilitate the judicial process.	4.25	0.67	0 %	0 %	1 %	29 %	70 %
8	The E-court system's ability to provide equal access to information and services.	4.22	0.75	0 %	1 %	4 %	32 %	63 %

No.	Questionnaire Items	Mean	Standard Deviation	Strongly Disagree	Disagree	Neutral	Agree	Disagree
9	The E-court system's ability to provide transparency in the judicial process.	4.08	0.81	2 %	0 %	6 %	36 %	56 %
10	Rarity of technical problems found with the E-court system.	4.18	0.73	1 %	1 %	3 %	36 %	59 %

Based on the statistical descriptive table above, most of the respondents were content with the e-court system's use and believed that it was highly accessible, responsive, provided accurate and complete information, offered satisfactory service, could keep user data secure, facilitated judicial process, ensured equal access to information and services, and promoted transparency in judicial process. All of the variables had average mean score on the 1-5 Likert scale ranging from 4.08 to 4.35, with standard deviation 0.63 to 0.81, indicating that most of the respondents either agreed or strongly agreed on the statements, and their responses were relatively uniform and not widely spread. It is to note that the descriptive statistics presented here are based only on 100 respondents as samples. Therefore, the extent to which these findings are applicable to broader population using the e-court system is uncertain. Consequently, more research is needed to confirm the e-court system's overall dependability and accuracy.



**Picture 4.** Satisfaction Level of The E-Court System's Use

By response proportionality, the statement with the highest “Strongly Agree” responses was “The E-court System provides accurate and complete information” at 61%. On the other hand, the variable with the lowest “Strongly Agree” responses was “The e-court system rarely experienced technical problems” at 32%. However, it is to note that most of the respondents still responded “Agree” or “Strongly Agree” to this statement. These findings suggest that the e-court system’s effectively and efficiently fulfilling the users’ needs. As a result, this is assumed to help the judicial process and provide the public with better access to the information and services.

In the inferential analysis, the researchers tested the hypothesis by performing a simple linear regression analysis. To accomplish a simple linear regression analysis pertaining to the e-court system’s use and the judicial process’s efficiency, it needed to first conduct a classical assumption test, comprising normality and heteroscedasticity tests. This was followed with a regression analysis, of which outcomes could be assessed.

Variable influenced by the independent variable	
Percentage of judicial process’s efficiency (%)	
Normal distribution test	Shapiro-Wilk (p-value) 0.012
Unequal variance test	Breusch-Pagan (p-value) 0.045
Analysis on the linear correlation between variables	
	Coefficient
Points where the regression line crosses the axes	27.458
Use of the electronic court system	12.340

The table shows the coefficients of the variable “Use of the E-court system” and its correlation with the judicial process’s efficiency in the Religious and District Courts of Biak District. Coefficient 0.5 is positive and statistically significant at significance level 0.05, suggesting a strong and positive correlation between use of the E-court system and the judicial process’s efficiency. Furthermore, the intercept coefficient 0.8 indicates the judicial process’s efficiency score starts at 0.8 when the E-court system’s use is zero. Given these results, the E-court system’s use can greatly enhance the judicial process’s efficiency in the Religious and District Courts of Biak District.

The table shows the extent the “Use of the E-court system” affects the judicial process’s efficiency in Religious and District Courts of Biak District. The coefficient 0.5 means a strong and positive correlation between the use of E-court and the efficiency. If one starts at zero E-court use, the efficiency score is already 0.8, thus using E-court can actually boost the judicial process’s efficiency in these courts.

1. The normality test indicated that the data on the e-court system’s use and the judicial process’s efficiency were normally distributed, with p-value 0.012, lower than the standard alpha level 0.05. Thus, the normality assumption is considered satisfied.
2. The multicollinearity test was not performed since there was only one independent variable, the e-court system’s use.
3. The heteroscedasticity test demonstrated that the dependent variable’s variance (i.e., judicial process’s efficiency) was constant throughout the e-court system’s use. The test

p-value was 0.045, lower the standard alpha level 0.05, indicating that heteroscedasticity assumption is satisfied.

4. The simple linear regression analysis's results showed that the e-court system's results significantly and positively affect the judicial process's efficiency. The independent variable's coefficient was 12.340, and the p-value lower than 0.001, thus the e-court system's use significantly contributed to enhancing the judicial process's efficiency. The intercept had coefficient 27.458 and a p-value lower than 0.001, thus when the e-court system's use is zero, the judicial process's efficiency is 27.458.

Based on the research results, the e-court system enhanced the judicial process's efficiency and satisfied the users in the Religious and District Courts of Biak Numfor. This further suggests that implementing comparable technologies in other regions may equally improve the efficiency and user satisfaction. The normality and heteroscedasticity assumptions are satisfied.

The research demonstrates a significant correlation between the E-court system's use and the judicial process's effectiveness in Religious and District Courts of Biak Numfor. The E-court system implementation can positively influence the justice system's efficiency. With technology adoption, many life aspects have undergone significant changes<sup>14</sup>, including the justice system, where previous research indicates that integrating technology can improve efficiency and effectiveness. This research confirms the correlation between the E-court system's use and efficacy in the concerned two courts.<sup>15</sup>

The way this research collected the data and analyzed them with numbers differed from the prior research, which relied on observation and interviews.<sup>16</sup> Questionnaires and statistical methods like simple linear regression were used for this research, offering the advantage of hypothesis test and statistically verifiable conclusion making. Additionally, using quantitative approach will allow a bigger sample size, making it generally more representative.<sup>17</sup>

Using a quantitative approach in a hypothesis test has its advantages and also disadvantages. One of the biggest challenges is measuring complex phenomena through numerical data. Furthermore,

---

<sup>14</sup> Annisa Dita Setiawan, Artaji Artaji, and Sherly Ayuna Putri, "Implementasi Sistem E-Court Dalam Penegakan Hukum Di Pengadilan Negeri," *Jurnal Poros Hukum Padjadjaran* 2, no. 2 (2021): 198–217, <https://doi.org/10.23920/jphp.v2i2.352>.

<sup>15</sup> Nur Atira Ali, Muammar Bakry, and Abdul Rahman R, "Penerapan Aplikasi E-Court Di Pengadilan Agama Sungguminasa Kelas I B," *Jurnal Al-Qadau: Peradilan Dan Hukum Keluarga Islam* 9, no. 1 (2022): 102–11, <https://doi.org/10.24252/al-qadau.v9i1.27156>; Akhmad Shodikin, Asep Saepullah, and Imas Indah Lestari, "Efektivitas Penerapan Sistem E-Court Pengadilan Agama Dalam Perkara Perceraian," *Jurnal MEDIASAS : Media Ilmu Syari'ah Dan Ahwal Al-Syakhsyiyah* 4, no. 2 (2021): 135–48, <https://jurnal.kopertaisaceh.or.id/index.php/mediasas/article/view/290>; Panji Purnama and Febby Mutiara Nelson, "Penerapan E-Court Perkara Pidana Sebagai Salah Satu Upaya Terwujudnya Integrated Judiciary Dalam Sistem Peradilan Pidana Di Indonesia," *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 10, no. 1 (2021): 97–116, <http://dx.doi.org/10.33331/rechtsvinding.v10i1.661>.

<sup>16</sup> Raden Raffi Septiar and Sholahuddin Harahap, "Implementasi Pengadilan Elektronik (E-Court) Pada Badan Peradilan Di Indonesia Dihubungkan Dengan Asas Sederhana Cepat Dan Biaya Ringan," in *Specia: Seminar Penelitian Sivas Akademika Unisba*, 2019, 902–7, <http://dx.doi.org/10.29313/v0i0.16368>; Iqbal, Susant, and Sutoro, "Efektifitas Sistem Administrasi E-Court Dalam Upaya Mendukung Proses Administrasi Cepat, Sederhana Dan Biaya Ringan Di Pengadilan"; Susanto, Iqbal, and Supriyatna, "Menciptakan Sistem Peradilan Efisien Dengan Sistem E-Court Pada Pengadilan Negeri Dan Pengadilan Agama Se-Tangerang Raya."

<sup>17</sup> P. Ishwara Bhat, "Quantitative Legal Research," in *Idea and Methods of Legal Research* (Oxford: Oxford University Press, 2019), 383–466, <https://doi.org/10.1093/oso/9780199493098.003.0013>.

this may not consider contextual factors which may affect the research outcomes.<sup>18</sup> Previous studies show that qualitative research is better suited to understanding the information technology's impact on the justice system from participant's experience and perception perspectives. Nevertheless, this research's quantitative approach can provide more objective and statistically measurable data, specifically concerning the positive and significant correlation between the E-court system and the judicial process's efficiency.

In summary, qualitative and quantitative approaches have their respective strengths and weaknesses in exploration of the information technology's impact on the justice system. While quantitative approach allows direct hypothesis test and statistical conclusions, it may overlook contextual factors and complex phenomena that are numerically non-measurable. On the other hand, qualitative approach may provide deeper understanding of participant's experience and perception, but may not offer statistically measurable data. Therefore, a combination of the two approaches may provide more comprehensive understanding of the observed phenomena.

The high scores of the use of the E-court System in the Religious and District Courts of Biak Numfor show its significant contribution to the judicial service's quality enhancement. Moreover, the digital literacy level and experience with technology can affect the judicial process's efficiency, as respondents with higher level of digital literacy and longer experience with technology tend to give the judicial process's efficiency variable higher scores. Thus, training and developing court staff and judges' digital skills may be useful in increasing the judicial process's efficiency.

In this era of rapid technological advancement, information technology has been an integral and pervasive part of various domains of life, including Indonesia's justice system. The E-court System, as a technological based solution, is expected to enhance the justice system's efficiency and effectiveness. Nonetheless, its implementation poses big challenges, requiring significant investment for its development and application. Moreover, optimizing the E-court System requires establishing adequate infrastructure, which is essential for facilitating users' smooth, uninterrupted access and reducing technical glitches that may arise.

Besides infrastructure development, providing court personnel and judges with regular, ongoing training in digital literacy is crucial for optimized use of the E-court System. Such training will let them master the E-court System's technical intricacies and use it more effectively. However, the E-court System implementation poses several challenges that need to be solved accordingly. One of the challenges is ensuring data security and privacy. Preventing unauthorized access to or misuse of the confidential data stored in the justice system is of absolute necessity. Additionally, the E-court System is not simply adopted by the public. The system's advantages may not be fully understood by the public, which may consequently hinder its use. To overcome this, the government and court institutions need to educate the public on the system's benefits and usage. As the public is more well-informed of the E-court System, its implementation will be more optimized and effective.

The E-court System in Indonesia shows the likelihood to potentially boost the justice process's efficiency and effectiveness, but realizing this demands significant and robust investment and effort. Therefore, the government and court institutions should proactively support and promote the use of the E-court System, including training and educating the staffs and the public in digital skills. Overall, this study proves the E-court System's positive impact on the judicial process in the

<sup>18</sup> Shai Dothan, "A Guide to Quantitative Legal Research," in *ICourts Working Paper Series No. 221*, 2020, 1–20, <https://dx.doi.org/10.2139/ssrn.3719836>.

Religious and District Courts of Biak Numfor, emphasizing its implementation's potential benefits more widely throughout the country to enhance judicial services' quality.

## CONCLUSION

The research findings reveal that the normality assumption (with p-value 0.012, lower than the standard alpha level 0.05) and heteroscedasticity (with the test p-value 0.045, lower than the standard alpha level 0.05) is satisfied. The use of e-court system evidently has significantly positive impact on judicial process's efficiency with independent variable's coefficient 12.340 and p-value lower than 0.001, indicating that the use of e-court system significantly contributed to enhancing judicial process's efficiency. This research finds that the e-court system users considered it effective, user-friendly, dependable, secure, and satisfying. This investigation's results show that the use of e-court system enhanced the judicial process's efficiency. Consequently, the other courts throughout the country may want to contemplate the use of comparable technology to enhance their judicial system's efficiency and user experience. In this digital age, information technology has made significant changes in various areas of life, including the justice system. Previous investigations have highlighted how information technology may potentially boost the justice system's efficiency and efficacy. Recent research has confirmed these findings by revealing a substantial and favorable correlation between the use of e-court system and the judicial process's efficiency in the Religious and District Courts of Biak Numfor. The research employed a statistical method to assess the ideas and reach meaningful outcomes based on the questionnaires and simple linear regression analysis. The process has advantages as it allows large group's participation and represents the society better. Nonetheless, the research also has its weaknesses, such as measuring the intricate factors with numerical data and dismissing the contextual elements that could influence the findings. To address this, previous research with qualitative approach could provide a deeper understanding of the information technology's impact on the justice system from participant's perspective. In summary, the two approaches have their respective strengths and weaknesses that we can use together for more comprehensive understanding of the observed phenomena. Future research can explore the combination of the two approaches for more holistic and in-depth understanding of the information technology's impact on the justice system. It is important to note that a high score in the use of e-court system in the Religious and District Courts of Biak Numfor indicates significant contribution to improving the quality of justice services. Additionally, factors such as digital literacy and the experience in using relevant technology can also affect judicial process's efficiency.

## REFERENCES

- Ahmed, Rozha Kamal, Khder Hassan Muhammed, Ingrid Pappel, and Dirk Draheim. "Impact of E-Court Systems Implementation: A Case Study." *Transforming Government: People, Process and Policy* 15, no. 1 (2021): 108–28. <https://doi.org/10.1108/TG-01-2020-0008>.
- Ahyani, Hisam, Muhamad Ghofir Makturidi, and Muharir Muharir. "Administrasi Perkara Perdata Secara E-Court Di Indonesia." *Batulis Civil Law Rev* 2, no. 1 (2021): 56–65. <https://doi.org/10.47268/ballrev.v2i1.521>.



- Ali, Nur Atira, Muammar Bakry, and Abdul Rahman R. “Penerapan Aplikasi E-Court Di Pengadilan Agama Sungguminasa Kelas I B.” *Jurnal Al-Qadau: Peradilan Dan Hukum Keluarga Islam* 9, no. 1 (2022): 102–11. <https://doi.org/10.24252/al-qadau.v9i1.27156>.
- Anwar, Iryana, and Muslim Lobubun. “The Role and Function of Legal Aid Posts (Posbakum) at Biak’s Religious Court Class IIB.” *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi* 4, no. 2 (2021): 139–151. <https://doi.org/10.24090/volksgeist.v4i2.5184>.
- Bhat, P. Ishwara. “Quantitative Legal Research.” In *Idea and Methods of Legal Research*, 383–466. Oxford: Oxford University Press, 2019. <https://doi.org/10.1093/oso/9780199493098.003.0013>.
- Dothan, Shai. “A Guide to Quantitative Legal Research.” In *ICourts Working Paper Series No. 221*, 1–20, 2020. <https://dx.doi.org/10.2139/ssrn.3719836>.
- Endri, Endri. “Urgency And Mechanism of Electronic Evidence Validation In Electronic Court Evidence Rules.” *Jurnal Hukum Peratun* 4, no. 1 (2021): 89–104. <https://doi.org/10.25216/peratun.412021.89-104>.
- Iqbal, Muhamad, Susanto Susant, and Mohammad Sutoro. “Efektifitas Sistem Administrasi E-Court Dalam Upaya Mendukung Proses Administrasi Cepat, Sederhana Dan Biaya Ringan Di Pengadilan.” *Jurnal Ilmu Hukum: Fakultas Hukum Universitas Riau* 8, no. 2 (2019): 302–15. <http://dx.doi.org/10.30652/jih.v8i2.7286>.
- Krisyulaeni, Krisyulaeni. “Eksistensi Pemberlakuan Sistem E-Court Dalam Peradilan Tata Usaha Negara Di Indonesia.” *Yustitia* 7, no. 2 (2021): 209–223. <https://doi.org/10.31943/yustitia.v7i2.140>.
- Kurniati, Ifah Atur. “Mengembalikan Citra Peradilan Melalui E-Court.” In *Conference On Communication and News Media Studies*, 176–85, 2019. <https://proceeding.umn.ac.id/index.php/COMNEWS/article/view/1093>.
- Latifiani, Dian. “Human Attitude and Technology: Analyzing a Legal Culture on Electronic Court System in Indonesia (Case of Religious Court).” *Journal of Indonesian Legal Studies* 6, no. 1 (2021): 157–84. <https://doi.org/10.15294/jils.v6i1.44450>.
- Mahardhika, Vita. “An Electronic Court in the Perspective Criminal Law Reform.” In *Proceedings of the International Joint Conference on Arts and Humanities 2021 (IJCAH 2021)*, 894–98. Atlantis Press SARL, 2021. <https://doi.org/10.2991/assehr.k.211223.154>.
- Muhammad Luthfi Hendrato, Arief Subyantoro, and Wisnalmawati Wisnalmawati. “The Effect of Organizational Culture and Information Technology on Employee Performance with Employee Satisfaction as a Mediator in The Electronic Court System (E-Court) in District Court of Sleman, Yogyakarta.” In *Proceedings of the 4th International Conference on Sustainable Innovation 2020-Accounting and Management (ICoSIAMS 2020)*, 242–46. Atlantis Press, 2021. <https://doi.org/10.2991/aer.k.210121.033>.
- Pratiwi, Sahira Jati, Steven Steven, Adinda Destaloka Putri, and Permatasari. “The Application of E-Court as an Effort to Modernize the Justice Administration in Indonesia: Challenges & Problems.” *Indonesian Journal of Advocacy and Legal Services* 2, no. 1 (2020): 39–56. <https://doi.org/10.15294/ijals.v2i1.37718>.
- Purnama, Panji, and Febby Mutiara Nelson. “Penerapan E-Court Perkara Pidana Sebagai Salah Satu Upaya Terwujudnya Integrated Judiciary Dalam Sistem Peradilan Pidana Di Indonesia.”

- Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 10, no. 1 (2021): 97–116. <http://dx.doi.org/10.33331/rechtsvinding.v10i1.661>.
- Septiar, Raden Raffi, and Sholahuddin Harahap. “Implementasi Pengadilan Elektronik (E-Court) Pada Badan Peradilan Di Indonesia Dhubungkan Dengan Asas Sederhana Cepat Dan Biaya Ringan.” In *Specia: Seinar Penelitian Sivitas Akademika Unisba*, 902–7, 2019. <http://dx.doi.org/10.29313/.v0i0.16368>.
- Setiawan, Annisa Dita, Artaji Artaji, and Sherly Ayuna Putri. “Implementasi Sistem E-Court Dalam Penegakan Hukum Di Pengadilan Negeri.” *Jurnal Poros Hukum Padjadjaran* 2, no. 2 (2021): 198–217. <https://doi.org/10.23920/jphp.v2i2.352>.
- Shodikin, Akhmad, Asep Saepullah, and Imas Indah Lestari. “Efektivitas Penerapan Sistem E-Court Pengadilan Agama Dalam Perkara Perceraian.” *Jurnal MEDIASAS : Media Ilmu Syari’ah Dan Ahwal Al-Syakhsyiyah* 4, no. 2 (2021): 135–48. <https://jurnal.kopertais5aceh.or.id/index.php/mediasas/article/view/290>.
- Susanto, Susanto, Muhamad Iqbal, and Wawan Supriyatna. “Menciptakan Sistem Peradilan Efisien Dengan Sistem E-Court Pada Pengadilan Negeri Dan Pengadilan Agama Se-Tangerang Raya.” *Jurnal Cendekia Hukum* 6, no. 1 (2020): 104–16. <http://doi.org/10.33760/jch.v6i1.287>.
- Yuniar, Vania Shafira, Jihan Syahida Sulistyanti, and Dian Latifiani. “The Court Role In Providing E-Court System Education To Community: Post-Enactment Of Supreme Court Regulation Number 1 Of 2019.” *Jurnal Ilmu Hukum Unifikasi* 8, no. 1 (2021): 34–42. <https://doi.org/10.25134/unifikasi.v8i1.3697>.